

Rapid Assessment Reference Condition Model

The Rapid Assessment is a component of the LANDFIRE project. Reference condition models for the Rapid Assessment were created through a series of expert workshops and a peer-review process in 2004-2005. For more information, please visit www.landfire.gov. Please direct questions to helpdesk@landfire.gov.

Potential Natural Vegetation Group (PNVG):

R#SBDWlw

Low Sagebrush

General Information

Contributors (additional contributors may be listed under "Model Evolution and Comments")

Modelers

Joe Wagner jawagner@or.blm.gov

Bob Hopper rhopper@or.blm.gov

Jeff Rose jrose@or.blm.gov

Reviewers

Jon Bates jon.bates@oregonstate.edu

Desi Zamudio dzamudio@fs.fed.us

Charlie Tackman Charlie_Tackman@or.blm.gov

Vegetation Type

Shrubland

Dominant Species*

ARAR8

ARRI

POSE

SIHY

General Model Sources

Literature

Local Data

Expert Estimate

LANDFIRE Mapping Zones

1 8

2 9

7

Rapid Assessment Model Zones

California

Great Basin

Great Lakes

Northeast

Northern Plains

N-Cent.Rockies

Pacific Northwest

South Central

Southeast

S. Appalachians

Southwest

Geographic Range

This occurs in south central & southeast Oregon, central and northern Oregon and eastern Washington.

Biophysical Site Description

Soils are shallow to bedrock or clayey restrictive layer present (4 to 10 inches average).

Precipitation is usually winter snow. Soils are frequently saturated to the surface in the winter.

Soil moisture regime is frigid.

Vegetation Description

Potential native plant community is dominated by low sagebrush and Sandberg bluegrass. Bottlebrush squirreltail and Thurbers Needlegrass are other important grasses. A variety of forbs may be present. Eventual cover might be 60% grass, 10% forbs and 30% shrub, but some areas may show bare ground.

Stiff sagebrush may be associated with low sagebrush in some areas at the center of the range, and completely replaces low sage in central Oregon and Washington.

Disturbance Description

Fire kills low sage for long periods of time.

Cheatgrass and Medusahead grasses are likely to invade site when disturbed. Shallow soils and exposed rock limits fire.

Adjacency or Identification Concerns

Associated with Mountain big sagebrush & Wyoming big sagebrush in southeastern Oregon, and Wyoming

*Dominant and Indicator Species are from the NRCS PLANTS database. To check a species code, please visit <http://plants.usda.gov>.

sagebrush and bunchgrass in Washington and northeastern Oregon. Low sagebrush is usually an island within big sagebrush, or vice-versa.

Scale Description

Sources of Scale Data Literature Local Data Expert Estimate

This type ranges from 1 acre to several thousand acres, and is patchy in nature. High winds, rather than continuous fuels, are the cause of large-extent fires.

Issues/Problems

These types are commonly threatened by invasion from annual grasses such as medusa head and cheatgrass.

Model Evolution and Comments

This PNVG was originally split into two types-- low elevation and high elevation (split at the 12" precipitation isohyet). They were combined for the Rapid Assessment into a single model because that more closely reflected how this type was conceived in adjacent model zones.

Succession Classes
Succession classes are the equivalent of "Vegetation Fuel Classes" as defined in the Interagency FRCC Guidebook (www.frcc.gov).

Class A 35 %

Early1 PostRep

Description

0 to 1% low sage cover.
 Herbaceous cover of bunchgrasses & forbs would fill to about 25 % within a few years.

Indicator Species* and Canopy Position

POSE
 SIHY

Upper Layer Lifeform

- Herbaceous
- Shrub
- Tree

Fuel Model no data

Structure Data (for upper layer lifeform)

	Min	Max
Cover	0 %	25 %
Height	no data	no data
Tree Size Class	no data	

Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:

Class B 15 %

Mid1 Open

Description

Cover is < 15%.
 Composition expected is 60-70%,
 Grass, 5-10% Forbs, 5-15% Shrubs.

Indicator Species* and Canopy Position

ARAR8
 ARRI
 SIHY
 POSE

Upper Layer Lifeform

- Herbaceous
- Shrub
- Tree

Fuel Model no data

Structure Data (for upper layer lifeform)

	Min	Max
Cover	1 %	15 %
Height	no data	no data
Tree Size Class	no data	

Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:

*Dominant and Indicator Species are from the NRCS PLANTS database. To check a species code, please visit <http://plants.usda.gov>.

Class C 50%

Late1 Closed

Description

Cover is > 15%.

Composition expected is 60-70% grass, 5-10% forbs, and 20-30% shrubs. Areas with shallow, clayey soils (may even show cobbles) may have less shrub, and more grass cover.

Indicator Species* and Canopy Position

ARAR8

ARRI

POSE

SIHY

Upper Layer Lifeform

- Herbaceous
- Shrub
- Tree

Fuel Model no data

Structure Data (for upper layer lifeform)

	Min	Max
Cover	15 %	35 %
Height	no data	no data
Tree Size Class	no data	

Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:

Class D 0%

Late1 Open

Description

Indicator Species* and Canopy Position

Structure Data (for upper layer lifeform)

	Min	Max
Cover	0 %	%
Height	no data	no data
Tree Size Class	no data	

Upper Layer Lifeform

- Herbaceous
- Shrub
- Tree

Fuel Model no data

Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:

Class E 0%

Late1 Closed

Description

Indicator Species* and Canopy Position

Structure Data (for upper layer lifeform)

	Min	Max
Cover	0 %	%
Height	no data	no data
Tree Size Class	no data	

Upper Layer Lifeform

- Herbaceous
- Shrub
- Tree

Fuel Model no data

Upper layer lifeform differs from dominant lifeform. Height and cover of dominant lifeform are:

Disturbances

Non-Fire Disturbances Modeled

- Insects/Disease
- Wind/Weather/Stress
- Native Grazing
- Competition
- Other:
- Other:

Fire Regime Group: 3

- I: 0-35 year frequency, low and mixed severity
- II: 0-35 year frequency, replacement severity
- III: 35-200 year frequency, low and mixed severity
- IV: 35-200 year frequency, replacement severity
- V: 200+ year frequency, replacement severity

*Dominant and Indicator Species are from the NRCS PLANTS database. To check a species code, please visit <http://plants.usda.gov>.

Historical Fire Size (acres)

Avg:
Min:
Max:

Fire Intervals (FI):

Fire interval is expressed in years for each fire severity class and for all types of fire combined (All Fires). Average FI is the central tendency modeled. Minimum and maximum show the relative range of fire intervals, if known. Probability is the inverse of fire interval in years and is used in reference condition modeling. Percent of all fires is the percent of all fires in that severity class. All values are estimates and not precise.

Sources of Fire Regime Data

- Literature
- Local Data
- Expert Estimate

	Avg FI	Min FI	Max FI	Probability	Percent of All Fires
<i>Replacement</i>	180			0.00556	41
<i>Mixed</i>	125			0.008	59
<i>Surface</i>					
<i>All Fires</i>	74			0.01357	

References

Lakeview NRCS Soil Survey information. Range Site MLRA - D21 & D23.

Miller, Richard - History, Ecology, and Management of Western Juniper Woodlands and Associated Shrublands: Annual report of Preliminary Results and Progress (1996, 1997, 1998 and 1999). Eastern Oregon Agricultural Research Center, HC71, 4.51 HWY 205, Burns, OR 97720.

Miller, Richard. ,Chris Baisan, Jeff Rose and Dave Paciorett. 2001. Pre- and Post- Settlement Fire Regimes in Mountain Big Sagebrush Steppe and Aspen: The Northwestern Great Basin. (Final Report 2001 to the National Interagency Fire Center).

Steinberg, Peter D. 2002. Artemisia arbuscula. In: Fire Effects Information System, [Online]. U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory (Producer). Available: <http://www.fs.fed.us/database/feis/> [2004, November 30].

Wagner, Joe, and Lance Okeson. - Juniper Mountain - CCC Exclosure - 4 FIREMON Plots in area. (data at the LAKEVIEW INTERAGENCY OFFICE - Lakeview, Oregon).